late others to report their results with roentgen ray treatment of erysipelas, thus giving more data so that reliable conclusions may be drawn. Most physicians have had very limited, if any, experience in treating erysipelas by roentgen ray. We are very glad to have the encouraging support of Doctor Soiland and, until we are convinced by further reports that erysipelas antistreptococci serum is definitely a better form of treatment for erysipelas, we shall continue to treat our patients by roentgen ray therapy.

The literature on this subject is quite meager, as already pointed out, and found only in the European journals. Consequently we cannot expect a preponderant mass of evidence in favor of the treatment.

One of the authors (Doctor Lawson) has recently published an article dealing with pyogenic skin lesions and their treatment by roentgen ray. He has observed that skin which is the site of an active infection will withstand from two to three erythema doses without showing any evidence of roentgen trauma. This observation has been substantiated by many roentgenologists who have treated these cases. In our experience we have not found very small doses, that is one-eighth to one-fourth of an erythema dose, to be efficacious.

CONGENITAL ATRESIA OF THE DUODENUM

WITH REPORT OF A CASE

By C. VERNER THOMPSON *

THE report of such a case as this is justified only because of the rarity of the condition. According to Tyces' system the first case was reported in 1803. Since then something over one hundred have appeared in the literature, and according to Abt there have been but three cases that have survived. These three were necessarily treated surgically.

The underlying cause for the appearance of an atresia in any portion of the intestinal tract is many times obscure. Several theories have been advanced that will account for one or a few of the lesions reported, but there is no theory that will adequately explain all atresic lesions.

One theory is that in the course of fetal development there occurs a desquamation of cells into what becomes the lumen of the gut. Canalization or an absorption of these desquamated cells then occurs as the fetal life progresses. One author has stated that the presence of the atresia may become defined as early as the fourth week of fetal life. With this idea of the absorption of an epithelial plug in the intestinal tract in mind the reason of the three types of atresias that occur becomes clear. The atresia may be (1) complete, (2) partial, and (3) in the form of a diaphragm as when all but a thin portion of the plug is absorbed.

The duodenum seems to have a certain predilection for the formation of atresias because in the few inches almost half as many occur as in the many remaining feet of gut. The involved area is more frequent in the region of the ampulla of Vater and usually just above the ampulla. The presence of one such anomaly is frequently associated with some other type of deformity; imperforate urethra, spina bifida, imperforate anus, bifurcation of the esophagus or multiple atresias in the intestinal tract elsewhere being a few of the other anomalies. The mesentery or mesocolon may be partially absent or otherwise deformed. Peritonitis may be present and is usually considered of syphilitic origin.

The babies in certain instances are premature, but as a rule they are fully developed and to all appearances when delivered are perfectly normal; they are often the first born.

In general the symptoms of duodenal atresias are rather constant depending somewhat on the exact site of the obstruction and are characteristic of obstruction.

Vomiting is always present, appears immediately with the ingestion of fluid or food, starts in easily, rapidly becomes projectile, and may come immediately with the taking of food or may follow in a few minutes to half an hour or more.

Constipation is present and becomes decidedly noticeable after thirty-six, forty-eight hours or more. The movements from the meconium present may mask the fact for a number of hours that the little patient is passing nothing through the bowel.

Distention becomes marked in a short time and, of course, is more pronounced just after the taking of fluids and just before it is vomited. With the obstruction in the duodenum the distention is marked in the upper abdomen giving the belly a funnel-shaped appearance.

Peristaltic waves can always be distinguished above the obstruction if care is used in looking for them.

Anuria, because of the small absorption of fluids, soon becomes apparent. Jaundice may or may not be present and probably will not help in making the diagnosis.

Emaciation is usually rapid, especially after the first twenty-four or thirty-six hours.

Restlessness may or may not be of diagnostic help early in the life of the infant. With the dehydration that follows the inability to absorb fluids the babies frequently become restless and their cry soon begins to lose its vigor.

Differential diagnosis must take into consideration hypertrophic pyloric stenosis, cerebral hemorrhage, and acquired obstruction such as an intussusception. The diagnosis should be determined early. Hypertrophic stenosis must be ruled out. This can as a rule be done by the frequent presence of a palpable mass in the upper abdomen, and the onset of the symptoms in a case of pyloric stenosis is not always of the abruptness that is found in atresia. The hypertrophic pyloric type of obstruction as a rule allows small amounts of food to pass by and appear in the stool. The symptoms therefore do not become so pronounced until several days, weeks, or even months have elapsed.

Cerebral hemorrhage can be ruled out by the early appearance of food products in the stools and the absence of distension.

An acquired obstruction such as may come from a volvulus or from bands cannot be differentiated from an atresia if it is present at birth or if it appears very soon after birth.

The prognosis as has been indicated is very grave. Operative procedure is justified at the earliest possible moment after the diagnosis has been deter-

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mined In the event that a single lesion is found in the duodenum gastroenterostomy is probably the operation of choice as having less technical difficulties when handling the small viscera of an infant. In the hands of a qualified surgeon resection of the atresic portion with an end-to-end anastomisis may be attempted.

CASE REPORT

Full-term baby girl born March 31, 1926, of a 30-year-old white primipara, after a normal labor of seven hours. Midline episiotomy done at delivery to save undue stretching of the perineal tissues. The past history of the mother was of no consequence in regard to the baby. She had had no serious illness, no history suggesting tuberculosis or syphilis. She had been married three and one-half years, husband apparently healthy. Family history: one sister's first baby, delivered at full term had a meningocele of which it died at 8 days of age. This same sister has since had two normal healthy babies. A second sister has had three healthy babies. A third sister, unmarried, has been operated on for tubercular peritonitis. One brother living and well. The mother's parents are living and well. The mother is well developed and nourished. The physical findings are essentially negative. She has a slightly enlarged thyroid. No evidence of tuberculosis. Blood Wassermann negative.

The infant was a plump, well-developed, full-term baby that cried lustily at birth. A careful examination following delivery revealed an apparently perfect baby. Vomiting occurred shortly after the first water had been given. The baby continued to vomit a few minutes after each feeding. It would retain feeding or fluids for twenty or thirty minutes and at times as long as one hour. After about twenty-four hours it was noticed that the vomiting had become projectile in character and also after the first day of life the vomitus was bile-stained. The baby slept and rested well and took the nipple or breast with vigor. She voided freely the first two days, then the urine output became very scant. Meconium was passed freely a few hours after birth and she continued to have one or two movements daily, the quantity diminishing each day. Jaundice appeared on the third day. Distention of the upper abdomen with visible peristalsis was demonstrated. The baby continued to rest well and seemed contented until the end of the fourth day, when it cried more than usual. Water and glucose solution by bowel prevented dehydration from becoming especially pronounced.

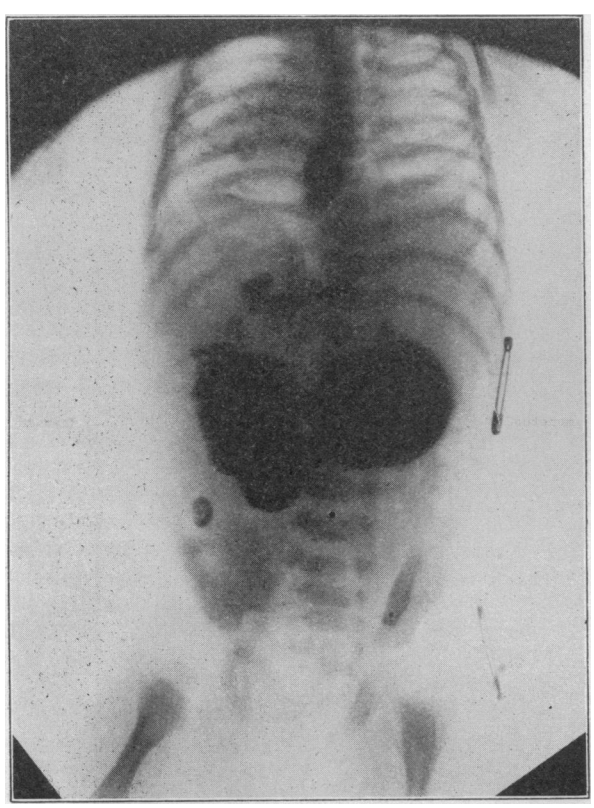

Fig. 1—Screens and films of the stomach with a barium meal demonstrated an obstruction of the bowel at about the junction of the first and second portions of the duodenum. There was very vigorous peristaltic action. The stomach was large and the first portion of the doudenum was distended. Examination forty-five minutes after the meal showed nothing to have passed the point of obstruction.

The diagnosis was complete obstruction and probably of the third portion of the duodenum just below the ampulla. The constant vomiting, distention, peristaltic waves moving from left to right across the upper abdomen, and the vomiting of the bile with the nonappearance of changes in the stool and the presence of the progressive anuria were the features that determined the presence of an obstruction and its probable location. There was no palpable mass in the region of the pylorus.

A small amount of barium was mixed in the feeding formula. Under the fluoroscope, deglutition seemed normal. A moderate cardiospasm was demonstrated. The stomach was greatly dilated and there was an increased motility in the region of the pylorus. The first portion of the duodenum was greatly dilated, so much so that the roentgenologist had some difficulty in deciding just where the stomach left off and the duodenum began after it was once filled. No passage of the feeding into the jejunum could be demonstrated.

Operation revealed the anticipated findings. In addition to the atresia in the third portion of the duodenum, which consisted of about three-quarters of an inch of closed gut, the stomach and intestine were covered with fine web-like adhesions. In the mesentery of the jejunum were many small palpable nodules of pinhead size suggesting peritoneal tubercles. There was no mesocolon present. The lumen of the gut was closed off for a distance of three-quarters of an inch in the third portion of the duodenum just below the ampulla. Resection of the atresic portion of the gut was done and an end-to-end anastomosis was ultimately completed. The anastomosis was difficult to complete, as the proximal portion underwent rapid digestion from the influence of the pancreatic juices. The dilatation of the upper viscera had thinned the duodenum to the point that it could hardly be made to hold the suture material.

From the technical difficulties encountered with the open end-to-end anastomosis in an infant a gastroenterostomy in this case possibly would have been the better choice of procedure. Certainly in the hands of a less experienced surgeon than Doctor Harris, gastroenterostomy should be the procedure of choice in such a condition in an infant because less difficulties of technique are apt to be encountered.

The baby made a rapid recovery from the anesthetic and gained strength the following day. Death occurred the third day after operation or the eighth day after birth.

It is with regret that this report is being made without the more complete information that would have been obtained and had a pathological study of the specimen been carried out.

I wish to acknowledge indebtedness to Drs. Fred F. Gundrum, Junius B. Harris, and Harold Zimmerman as consultants in the study of this child.

To each age its own bogy. To Victorian England the specter of Philistinism, to our own day the bugbear of standardization. Or perhaps after all they are one, and Philistinism the encroachments of which on the life of the spirit Matthew Arnold so passionately decried, and standardization, which we so stridently denounce, are only interchangeable terms for smugness and indifference and materialism. Our expostulators, living in a mechanistic age, ascribe to industry the results which the Victorian critic belabored from a different point of view. But, like him, they fear the swamping of the higher values of life by complacent materialism.—*Saturday Review of Literature.*